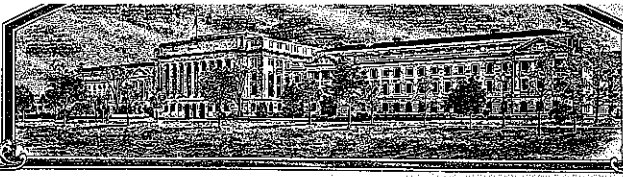


No.

200200264



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

NSU Research Foundation

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

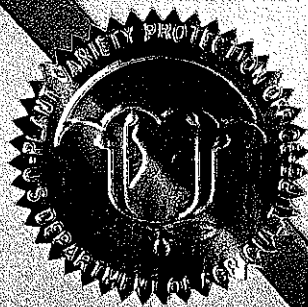
NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE VARIETY (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'Nannonatto'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this tenth day of April, in the year two thousand three.

Attest:



*Paul M. Johnson*

Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

*Andrew G. ...*

Secretary of Agriculture

REPRODUCE LOCALLY. Include form number and date on all reproductions

Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICEAPPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE  
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2420).

1. NAME OF OWNER NDSU Research Foundation		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME Nd 97-962	3. VARIETY NAME Nannona110
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) 1735 NDSU Research Park Drive PO Box 5002 Fargo, ND 58105-5002		5. TELEPHONE (include area code) (701) 231-8931	FOR OFFICIAL USE ONLY PVPO NUMBER 200200264 2002002
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) 501 (C) 3		8. IF INCORPORATED, GIVE STATE OF INCORPORATION North Dakota	9. DATE OF INCORPORATION May, 1989
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Theodore C. Helms Dept. of Plant Sciences North Dakota State University Fargo, ND 58105-5051		11. FILING AND EXAMINATION FEES: \$ 2,705.00 DATE 9/11/2002 CERTIFICATION FEE: \$ 432.00 DATE 4/4/03	
11. TELEPHONE (include area code) (701) 231-8136	12. FAX (include area code) (701) 231-8474	13. E-MAIL ted.helms@ndsu.nodak.edu dzetocha@ndsuext.nodak.edu	14. CROP KIND (Common Name) soybean
15. GENUS AND SPECIES NAME OF CROP Glycin max	16. FAMILY NAME (Botanical) Leguminosae	17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	
18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable upland seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,705), made payable to "Treasurer of the United States" (Send in the Plant Variety Protection Office)		19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 83(a) of the Plant Variety Protection Act <input checked="" type="checkbox"/> YES (If "Yes", answer items 20 and 21 below) <input type="checkbox"/> NO (If "No", go to item 22)	
		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? IF YES, WHICH CLASSES? <input checked="" type="checkbox"/> FOUNDATION <input checked="" type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED	
		21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? IF YES, SPECIFY THE <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED NUMBER 1,2,3, etc. (If additional explanation is necessary, please use the space indicated on the reverse.)	
22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	
24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42. Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF OWNER Dale Zetocha		SIGNATURE OF OWNER	
NAME (Please print or type) Dale Zetocha		NAME (Please print or type)	
CAPACITY OR TITLE Executive Director		CAPACITY OR TITLE	
DATE 9/9/02		DATE	

S&amp;T-470 (11-01) designed by the Plant Variety Protection Office with WordPerfect 9.0. Replaces STD-470 (04-01) which is obsolete.

(See reverse for instructions and information collection burden statement)

## INSTRUCTIONS

200200264

**GENERAL:** To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$2,705 (\$320 filing fee and \$2,385 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$320 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

## Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5281

Homepage: <http://www.ams.usda.gov/science/PVPO/pvp.htm>

## ITEM

- 18a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) evidence of uniformity and stability; and (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
  - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
  - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
19. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
21. See Section 83 of the Act for the Contents and Term of Plant Variety Protection.
22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
23. See Section 5.6 of the Act for instructions on claiming the benefit of an earlier filing date.

21. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

First sold as Foundation Seed April 9, 2002 in the U.S.

23. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

**NOTES:** It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center-East, Beltsville, MD 20705, Telephone: (301) 504-8089.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact the USDA's TARGET Center at 202-720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

S&T-470 (8-00) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD-470 (6-98) which is obsolete.

200200264

**Exhibit A**  
**Origin and Breeding History of the Variety Nannonatto**

Nannonatto, tested as ND no., 97-962, was derived from the cross ND91-2339<sup>1</sup>/M87-950) made in 1994. M87-950 is an experimental line developed by the University of Minnesota, St. Paul, MN that was never released as a named cultivar. The pedigree of M87-950 is Chico\*PI 437296. ND91-2339 is from the same cross as the released cultivar Danatto. The pedigree of ND91-2339 and Danatto is NattoKing K86 X unknown. Natto King 86 is a small-seeded cultivar developed by King Agro Co.; the unknown parent was provided by a North Dakota farmer (Jon Miller, 17993 County Road 16, Wahpeton, ND 58075). The cross was made in the summer of 1994 at Casselton, ND. The F<sub>1</sub> plant was grown in the 1994-1995 Chile, S.A. winter nursery. The F<sub>2</sub> seed was grown in the summer of 1995 and advanced to the F<sub>3</sub> generation by the single-pod bulk method. The F<sub>3</sub> population was grown in the 1995-1996 Chile winter nursery. F<sub>4</sub> plants from the segregating population were grown in the summer nursery located in Fargo, ND and individually threshed in the fall of 1996. F<sub>4:5</sub> plant-rows were evaluated and selected in the 1997 Casselton, ND nursery. ND97-962 was first tested in replicated yield trials in 1998. Individual F<sub>4:7</sub> plants were threshed in the fall of 1999 and 88 single plant selections were evaluated for uniformity in the summer of 2000 at Casselton and Fargo, ND nurseries. Of the 88 purification rows that were evaluated, 53 were discarded and the remaining 35 rows were individually harvested and bulked after selection for hilum color, plant maturity, flower color, plant height, seed size, pubescence color, seed coat luster and color, and pod color. Breeder seed of ND97-962 was increased in the 2000-2001 Chile winter nursery. In the summer of 2001 the Foundation seed of ND97-962 was increased at Casselton, and Carrington, ND. Nannonatto was released January 17, 2002 as an F<sub>10</sub> generation pure line soybean cultivar. Nannonatto has been observed over a period of two years to be uniform and stable. Variants observed in 2001 and 2002 include: 5 plants per 1000 that have grey pubescence and brown hila; 3 plants per 1000 that have tawny pubescence and black hila; and 3 plants per thousand that have that have tawny pubescence and grey hila.

200200264

**Exhibit B****Novelty Statement**

1. Nannonatto was developed primarily for competitive yield relative to other small-seeded soybean cultivars, suitable maturity, and especially small seed size. This cultivar was developed for the specialty sprout and natto markets and has traits that make it desirable for these human foods.
2. The most similar cultivar to Nannonatto is Danatto. Both Nannonatto and Danatto have purple flower color, grey pubescence, shiny seed coat luster with yellow seed coat, yellow hila color, and tan pods at maturity. SSR data show that Nannonatto differs from Danatto for satt147, satt 242, and satt 291 loci.

Biogenetic Services, Inc.  
3/10/03

**200200264****Summary of Observed Genotypes**

Primer	Nomatto	Nannonatto	Danatto
satt 009	22, 23, 33	22	11, 22
satt 038	11	22	22
satt 114	11	11	11
satt 147	22	22	11
satt 157	22	22	11, 22, 33, 44
satt 177	22	22, 33	11, 22
satt 191	11	11	11
satt 228	11	11	11
satt 242	11	22	11
satt 243	11	11	11
satt 291	11	22	11
satt 294	11	11	11
satt 302	11	11	11
satt 367	33	11	11, 22
satt 373	11	22	22
satt 384	11	11	11
satt 385	22	11	11
satt 408	11	22	22
satt 414	11	11	11
satt 420	11	22	12, 22
satt 534	11	11	11

**REPRODUCE LOCALLY. Include form number and date on all reproductions.**

Form Approved - OMB No. 0581-0055

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact the USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

**U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MD 20705**

**EXHIBIT C  
(Soybean)**

**OBJECTIVE DESCRIPTION OF VARIETY  
SOYBEAN (*Glycine max* (L.) Merr.)**

<b>NAME OF APPLICANT(S)</b> NDSU Research Foundation	<b>200200264</b>
<b>ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)</b> PO Box 5014 Fargo, ND 58105-5014	
<b>VARIETY NAME</b> Nannonatto	
<b>TEMPORARY OR EXPERIMENTAL DESIGNATION (important if one exists)</b> ND 97-962	

**PLEASE READ ALL INSTRUCTIONS CAREFULLY:** Place the appropriate number that describes the varietal character of this variety in the boxes below.

Place a zero in the first box (e.g. 

9	9	9
---	---	---

 or 

0	9
---	---

) when number is either 99 or less or 9 or less respectively. Data for quantitative

plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used:

Please answer all questions for your variety; lack of response may delay progress of your application.

**A. MORPHOLOGY**

**Seed Shape:**

<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>3</td></tr></table>	3	1 = Spherical (L/W, L/T, and T/W ratios < 1.2)	2 = Spherical-Flattened (L/W ratio > 1.2; L/T ratio < 1.2)
3			
	3 = Elongate (L/T ratio > 1.2; T/W ratio < 1.2)	4 = Elongate-Flattened (L/T ratio > 1.2; T/W ratio > 1.2)	

**Seed Coat Color:**

<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>1</td></tr></table>	1	1 = Yellow	2 = Green	3 = Brown	4 = Black	5 = Other (Please Specify)
1						

**Seed Coat Luster:**

<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>2</td></tr></table>	2	1 = Dull	2 = Shiny
2			

**Seed Size:**

<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>0</td><td>8</td></tr></table>	0	8	grams/100 seeds
0	8		

**Hilum Color:**

<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>2</td></tr></table>	2	1 = Buff	2 = Yellow	3 = Brown	4 = Gray	5 = Imperfect Black
2						
	6 = Black	7 = Other (Please Specify)				

200200264

**A. MORPHOLOGY** (*Continued*)

Cotyledon Color:

☐ 1 = Yellow      2 = Green

Seed Protein Peroxidase Activity:

☐ 2      1 = Low      2 = High

Hypocotyl Color:

<input type="checkbox"/> 4	1 = Green ( <i>'Evans'</i> or <i>'Davis'</i> )	2 = Green with Bronze Bands below Cotyledon ( <i>'Woodworth'</i> or <i>'Tracy'</i> )	3 = Light Purple below Cotyledons ( <i>'Beeson'</i> or <i>'Pickett 71'</i> )	4 = Dark Purple extending to unifoliolate leaves ( <i>'Hodgson'</i> , <i>'Coker'</i> , or <i>'Hampton 266A'</i> )
----------------------------	---------------------------------------------------	--------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------

Leaflet Shape:

☐ 2      1 = Lanceolate      2 = Oval      3 = Ovate      4 = Other (*Please Specify*)

Flower Color:

☐ 2      1 = White      2 = Purple      3 = White with a Purple Throat

Pod Color:

☐ 1      1 = Tan      2 = Brown      3 = Black

Pubescence Color:

☐ 1      1 = Gray      2 = Brown (Tawny)      3 = Light Tawny

Plant Habit:

☐ 3      1 = Determinate      2 = Semi - Determinate      3 = Indeterminate      4 = Intermediate

Maturity Group:

<input type="checkbox"/> 0	<input type="checkbox"/> 3	1 = 000 6 = III 11 = VIII	2 = 00 7 = IV 12 = IX	3 = 0 8 = V 13 = X	4 = I 9 = VI 14 = XI	5 = II 10 = VII 15 = XII
----------------------------	----------------------------	---------------------------------	-----------------------------	--------------------------	----------------------------	--------------------------------

Maturity Subgroup:

☐ 4      Please enter a value from 0 - 9
**B. DISEASE REACTIONS**

0 = Not Tested      1 = Susceptible      2 = Resistant      3 = Tolerant

Bacterial

☐ 0      Bacterial Pustule (*Xanthomonas campestris* pv. *glycines* (Nakano) Dye)

☐ 0      Bacterial Blight (*Pseudomonas syringae* pv. *glycinea* (Coerper) Young, Dye, & Wilkie)

☐ 0      Wildfire Blight (*Pseudomonas syringae* pv. *tabaci* (Wolf & Foster) Young, Dye, & Wilkie)



200200264

## B. DISEASE REACTIONS (Continued)

0 = Not Tested

1 = Susceptible

2 = Resistant

3 = Tolerant

Fungal.

☐ 0 Brown Spot (*Septoria glycines* Hemmi)Frogeye Leaf Spot (*Cercospora sojina* Hara)☐ 0

race 1

☐ 0

race 2

☐ 0

race 3

☐ 0

race 4

☐ 0

race 5

☐ 0

race 6

☐ 0

Other (Please Specify)

☐ 0Target Spot (*Corynespora cassiicola* (Berk. & Curt.) Wei)☐ 0Downey Mildew (*Peronospora trifoliorum* var. *manchurica* (Naum.) Syd. ex Gäum)☐ 0Powdery Mildew (*Microsphaera diffusa* Cke. & Pk.)☐ 0Brown Stem Rot (*Phialophora gregata* (Allington & Chamberlain) W. Gams.)☐ 0Stem Canker (*Diaporthe phaseolorum* (Cke. & Ell.) Sacc. var. *caulivora* Athow & Caldwell)☐ 0Pod and Stem Blight (*Diaporthe phaseolorum* (Cke. & Ell.) Sacc. var. *sojae* (Lehman) Wehm.)☐ 0Purple Seed Stain (*Cercospora kikuchii* (T. Matsu. & Tomoyasu) Gardener)☐ 0Rhizoctonia Root Rot (*Rhizoctonia solani* Kühn)Phytophthora Root Rot (*Phytophthora megasperma* Drechs. f. sp. *glycinea* (Kuan & Erwin))☐ 1

race 1

☐ 0

race 8

☐ 0

race 15

☐ 0

race 22

☐ 0

race 2

☐ 0

race 9

☐ 0

race 16

☐ 0

race 23

☐ 1

race 3

☐ 0

race 10

☐ 0

race 17

☐ 0

race 24

☐ 0

race 4

☐ 0

race 11

☐ 0

race 18

☐ 0

race 25

☐ 0

race 5

☐ 0

race 12

☐ 0

race 19

☐ 0

race 26

☐ 0

race 6

☐ 0

race 13

☐ 0

race 20

☐ 0

Other (Please Specify)

☐ 0

race 7

☐ 0

race 14

☐ 0

race 21

☐ 0☐ 0

Bud Blight (Tobacco Ringspot Virus)

☐ 0

Yellow Mosaic (Bean Yellow Mosaic Virus)

## B. DISEASE REACTIONS (Continued) 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Tolerant

☐ 0 Cowpea Mosaic (Cowpea Chlorotic Virus)

200200264

☐ 0 Pod Mottle (Bean Pod Mottle Virus)☐ 0 Seed Mottle (Soybean Mosaic Virus)

## Nematode

Soybean Cyst Nematode (*Heterodera glycines* Ichinohe)☐ 0 race 1☐ 0 race 4☐ 0 race 9☐ 0 race 2☐ 0 race 5☐ 0 race 14☐ 0 race 3☐ 0 race 6☐ 0 Other (Please Specify)☐ 0 Lance Nematode (*Hoplolaimus columbus* Sher)☐ 0 Southern Root Knot Nematode (*Meloidogyne incognita* (Kofoid & White) Chitwood)☐ 0 Northern Root Knot Nematode (*Meloidogyne hapla* Chitwood)☐ 0 Peanut Root Knot Nematode (*Meloidogyne arenaria* (Neal) Chitwood)☐ 0 Reniform Nematode (*Rotylenchus reniformis* Linwood & Olivera)☐ 0 Javanese Nematode (*Meloidogyne javanica* (Treub) Chitwood)☐ 0 Other Nematode (Please Specify)

## C. PHYSIOLOGICAL RESPONSES 0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Tolerant

☐ 3 Iron Chlorosis on Calcareous Soil☐ 0 Phosphorus☐ 0 Other (Please Specify) \_\_\_\_\_☐ 0 Boron☐ 0 Aluminum☐ 0 Salt☐ 0 Drought

**D. INSECT REACTIONS**

0 = Not Tested

1 = Susceptible

2 = Resistant

3 = Tolerant

☐Mexican Bean Beetle (*Epilachna varivestis* Mulsant)

200200264

☐Potato Leaf Hopper (*Empoasca fabae* (Harris))☐

Other (Please Specify)

**E. HERBICIDE REACTIONS**

0 = Not Tested

1 = Susceptible

2 = Resistant

☐

Metribuzin

☐

Sulfonylurea

☐

Glyphosate

☐

Glufosinate

☐

Sulfentrazone

☐

Other (Please Specify)

**F. TRANSGENIC COMPOSITION**

Has the development of the subject variety included the insertion of genetic material from an organism other than a soybean, or, the removal of genetic material from the application variety?

If yes, please complete the following information requests\*. Use additional pages if necessary.

YES

NO

☐☒

1. Please state the vector's name:

2. Please state the vector components:

3. Please describe the genetic material successfully transferred into the subject variety:

4. Please describe the insertion protocol:

\* A literature citation(s) explaining the four information requests above may be an acceptable alternative to completion of the "Transgenic Composition" portion of this form.

**G. BIOCHEMICAL MARKERS**

Please describe any biochemical information here, which you believe will be helpful in further describing the subject variety (e.g. Simple Sequence Repeats, Restriction Fragment Length Polymorphisms, Isozymic Characterization). Use additional pages if necessary.

---

H. COMMENTS

200200264

**EXHIBIT E**  
**STATEMENT OF THE BASIS OF OWNERSHIP**

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)  NDSU Research Foundation	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER  ND 97-962	3. VARIETY NAME  'Nannonatto
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) PO Box 5002 1735 NDSU Research Park Drive Fargo, ND 58105-5002	5. TELEPHONE (include area code)  (701) 231-8931	6. FAX (include area code)  (701) 231-6661
7. PVPO NUMBER <b>200200264</b>		

8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain. ☒ YES ☐ NO

9. Is the applicant (individual or company) a U.S. national or U.S. based company? ☒ YES ☐ NO  
If no, give name of country

10. Is the applicant the original owner? ☐ YES ☒ NO If no, please answer one of the following:

a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)?

☒ YES ☐ NO If no, give name of country

b. If original rights to variety were owned by a company(ies), is(are) the original owner(s) a U.S. based company?

☒ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (if needed, use reverse for extra space):  
See additional Exhibit E Statement on the Basis of the applicant's ownership included in the application.

**PLEASE NOTE:**

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. (Not all prohibited bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call 1-800-245-6340 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.

200200264

**Exhibit E****Statement of the basis of applicant's ownership**

Dr. Theodore Helms, an employee of the North Dakota Agricultural Experiment Station and North Dakota State University, is the plant breeder who developed 'NANNONATTO', the soybean cultivar for which Plant Variety Protection is hereby sought. The employee by agreement and because of the conditions of the use of the facilities and funds of the North Dakota Agricultural Experiment Station and North Dakota State University has assigned all ownership rights to 'NANNONATTO' to the North Dakota Agricultural Experiment Station and North Dakota State University.

North Dakota State University on behalf of the North Dakota Agricultural Experiment Station has assigned ownership to the NDSU Research Foundation. The NDSU Research Foundation is a nonprofit corporation set up to own and manage the intellectual property of North Dakota State University.